

Application No. 09/833,546

REMARKS

The Specification has been amended at page 1 to insert the missing application data in the Cross Reference to Related Applications. Claim 16, line 9, has been amended for purposes of clarity.

Claim 1 has been amended by incorporating the subject matter of claim 2 therein. Claim 2 has thereby been cancelled. Claim 3 has been amended to correct the dependency thereof. Claim 18 has been amended for purposes of clarity.

Entry of the above amendments is respectfully requested.

Review and reconsideration on the merits are further requested.

A Restriction Requirement has been entered under 35 USC §121 restricting the application to Group 1, claims 1-25 and Group 2, claim 26. In response, Applicants traverse the Restriction Requirement.

Applicants point out that the belt of claim 26 is the same as the belt of claim 1, except that the belt is a transfer belt in the imaging forming apparatus of claim 26. If Applicants were allowed, Applicants would amend claim 26 to include the recitation of an alcohol-soluble polyamide as the adhesive. Applicants submit that because the belt of claim 1 and the belt of claim 26 are the same, all claims should be prosecuted in the same application. Applicants submit that prosecuting claim 26 along with claims 1-25 would not require any further search on the part of the Examiner. Accordingly, Applicants request withdrawal of the Restriction Requirement under 35 USC §121.

The Disclosure has been objected to for using the term "monomer" on page 16, line 9. In response, Applicants have amended page 16, line 9 by deleting the objected-to term. Accordingly, Applicants request withdrawal of the objection to the Disclosure.

Claim 18 has been rejected under 35 USC §112, second paragraph, as indefinite. In response, Applicants have inserted the word "blend" after "polyanaline polyimide." Accordingly, Applicants submit that claim 18 is definite, and request withdrawal of the rejection of claim 18 under 35 USC §112, second paragraph.

Claims 1, 17 and 19-24 have been rejected under 35 USC §102(b) as anticipated by Parker, et al. In response, Applicants traverse the rejection.

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Applicants submit that Parker, et al. does not teach or suggest an alcohol-soluble polyamide as an adhesive to join mutually mating elements of an endless seamed flexible belt as claimed. Because Parker, et al. does not teach all of the elements of the rejected claims, Applicants submit that the claims are not anticipated by the reference.

In addition, Applicants submit that the present claims are not rendered obvious in view of the cited reference. Applicants submit that there has to be some kind of teaching or suggestion in the reference that would have motivated one of ordinary skill in the art to modify the adhesive set forth in the reference into an alcohol-soluble polyamide as claimed. Because there is no teaching or suggestion to make the change from the adhesive set forth in Parker, et al. into an alcohol-soluble polyamide as claimed, Applicants submit that the present claims are not obvious in view of the cited reference. Accordingly, Applicants request withdrawal of the rejection of claims 1, 17, and 19-24 under 35 USC §102(b) as anticipated by Parker, et al.

Claims 2-16, 18 and 25 have been rejected under 35 USC §103(a) as obvious over Parker, et al. in view of Fuller, et al., Sakakibara, et al. and the Handbook of Thermoset Plastics. In response, Applicants traverse the rejection.

As set forth above, Parker, et al. does not teach or suggest an alcohol-soluble polyamide as claimed in amended claim 1.

Turning to Fuller, et al., this reference relates to a multi-layered photoreceptor. The photoreceptor comprises layers that are stacked on top of one another, and the reference does not teach or suggest seaming two ends of a belt together as claimed. The Office Action states that Fuller, et al. discloses it is known to use an alcohol-soluble polyamide adhesive for producing flexible electrophotographic imaging members and cites various columns and line numbers. However, Applicants have reviewed Fuller, et al. in detail, including the column and line numbers set forth in the Office Action. Nowhere in the specification is an alcohol-soluble polyamide adhesive recited as bonding two ends of a film together as claimed. The only discussion of an adhesive layer which is used to bond one layer to another layer, stacked on top of one another, is at column 7, lines 49-55. The adhesive layer materials include, for example, polyesters, polyurethanes, and the like. The reference does not teach or suggest use of an alcohol-soluble polyamide as an adhesive for bonding two ends of a film together as

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claimed. Instead, the reference teaches various layers and binder resins that are included in those layers. These binder resins include polyamides and alcohol-soluble polyamides. However, the binder resins are not used to "bind" layers together. Instead, the binder resins are used within the matrix of different layers such as the charge generation binder layer. This is a separate layer on the photoreceptor. Again, the photoreceptor is a multi-layer photoreceptor with the various layers stacked on top of one another. The reference does not teach or suggest binding two ends of a film together. Again, the reference does not teach or suggest the use of an alcohol-soluble polyamide as an adhesive, and further does not teach or suggest the use of an alcohol-soluble polyamide adhesive to seam two ends of a belt together as claimed.

Applicants submit that Sakakibara, et al. does not teach or suggest the deficiencies of the primary and secondary references, namely, the reference does not teach or suggest an alcohol-soluble polyamide used as an adhesive to bind two ends of a belt together as claimed.

Applicants further submit that the publication entitled "Handbook of Thermoset Plastics" also does not teach or suggest use of alcohol-soluble polyamide adhesive to bind two ends of a belt together as claimed.

In addition, Fuller, et al., Sakakibara, et al. and the publication all do not teach or suggest a belt comprising a first end and a second end, each of the first end and second comprising a plurality of mutually mating elements which join in an interlocking relationship to form a seam. The claimed endless seamed flexible belt is of a unique structure having mutually mating elements which join in an interlocking relationship to form a seam. Such a unique belt having mutually mating elements and in an interlocking relationship, requires a specific adhesive to bond these interlocking members together. Although Parker, et al. teaches a puzzle cut seamed belt having mutually mating elements which join in an interlocking relationship, the reference does not teach or suggest an alcohol-soluble polyamide adhesive. Applicants submit that one of ordinary skill in the art faced with the teachings of the secondary references, would not have been motivated to use an alcohol-soluble polyamide adhesive to bind mutually mating elements of seamed members as claimed. Again, Fuller, et al. does not teach or suggest an alcohol-soluble polyamide adhesive. Instead, the reference

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teaches use of an alcohol-soluble polyamide in a binder resin layer of a photoreceptor. The tertiary and quaternary references also do not include the teaching of an alcohol-soluble adhesive to bind seaming members.

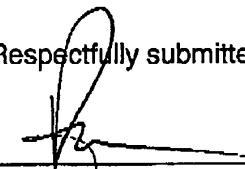
Because none of the references teach or suggest the use of an alcohol-soluble polyamide adhesive to bind mutually mating elements, Applicants submit that the present claims are not rendered obvious in view of the cited combination. Accordingly, Applicants request withdrawal of the rejection of claims 2-16, 18 and 25 under 35 USC §103 as obvious over Parker, et al., in view of Fuller, et al., further in view of Sakakibara, and the Handbook of Thermoset Plastics.

In view of the above arguments and amendments, Applicants submit that all claims should now be in condition for allowance. Early indication of allowability is respectfully requested.

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney (or agent) hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

In the event the Examiner considers personal contact advantageous to the disposition of this case, s/he is hereby authorized to call Applicant's Attorney, Annette L. Bade, at telephone number (310) 333-3682.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE:IN THE SPECIFICATION

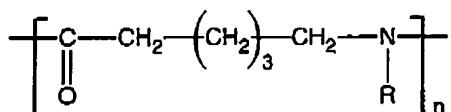
Amended Cross Reference To Related Applications beginning on page 1, line 1 ending on page 2 line, 4:

Attention is directed to U.S. Patent Application Serial No. 09/493,445 (D/97525D), filed January 28, 2000, entitled "Process and Apparatus for Producing an Endless Seamed Belt;" U.S. Patent Application Serial No. 09/470,931 (D/99689) filed December 22, 1999, entitled, "Continuous Process for Manufacturing Imageable Seamed Belts for Printers;" U.S. Patent Application Serial No. 09/088,011, (D/97683), filed May 28, 1998, entitled, "Unsaturated Carbonate Adhesives for Component Seams;" U.S. Patent Application No. 09/615,444 (D/99598), filed July 13, 2000, entitled, "Polyimide Adhesive For Polyimide Component Interlocking Seams;" U.S. Patent Application No. 09/615,426 (D/99598Q), filed July 13, 2000, entitled, "Process For Seaming Interlocking Seams Of Polyimide Component Using Polyimide Adhesive"; U.S. Patent Application Serial No. 09/660,248 (D/99610), filed September 13, 2000, entitled, "Imageable Seamed Belts Having Fluoropolymer Adhesive Between Interlocking Seaming Members;" U.S. Patent Application Serial No. 09/660,249 (D/99610Q), filed September 13, 2000, entitled, "Imageable Seamed Belts Having Fluoropolymer Overcoat;" U.S. Patent Application Serial No. [----] 09/833,930 (A0895) filed [----] April 11, 2001, entitled, "Imageable Seamed Belts Having Hot Melt Processable, Thermosetting Resin and Conductive Carbon Filler Adhesive Between Interlocking Seaming Members;" U.S. Patent Application Serial No. 09/833,965 [----] (D/A0895Q), filed [----] April 11, 2001, entitled, "Conductive Carbon Filled Polyvinyl Butyral Adhesive;" U.S. Patent Application Serial No. [----] 09/833,488 (D/A0895Q1), filed [----] April 11, 2001, entitled, "Dual Curing Process for Producing a Puzzle Cut Seam;" and U.S. Patent Application Serial No. [----] 09/833,507 (A0584Q) filed [----] April 11, 2001, entitled "Polyamide and Conductive Filler Adhesive." The disclosures of each of these references are hereby incorporated by reference in their entirety.

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Amended paragraph beginning on page 15, line 15 and ending on page 16, line 9:

A preferred adhesive for use with a belt seam, preferably a puzzle cut belt seam, is a polyamide resin. In embodiments, the polyamide resin is alcohol-soluble. By "alcohol-soluble," Applicants refer to materials, which dissolve in alcohols such as butanol, ethanol, methanol and the like. In embodiments, the polyamide resin in the adhesive has functional pendant groups selected from the group consisting of methoxy, ethoxy and hydroxy pendant groups. In embodiments, the pendant functional group is a methoxy methylene group. In embodiments, the polyamide has the following formula:



wherein n is a number of from about 50 to about 1,000, or from about 150 to about 500, or about 270, and wherein R is selected from the group consisting of hydrogen; alkyl having from about 1 to about 20 carbons, or from about 1 to about 10 carbons, such as methyl, ethyl, propyl and the like; alkoxy having from about 1 to about 20 carbons, or from about 1 to about 10 carbons such as methoxy, ethoxy, propoxy and the like; alkyl alkoxy having from about 1 to about 20 carbons, or from about 1 to about 10 carbons such as methyl methoxy, methyl ethoxy, ethyl methoxy, methyl dimethoxy, methyl trimethoxy, and the like; and alkylene alkoxy having from about 1 to about 20 carbons, or from about 1 to about 10 carbons such as methylene methoxy, ethylene ethoxy, and the like. In embodiments, monomers of the above formula can be included in an adhesive composition, wherein R [in the monomers] can be hydrogen, methylene methoxy, and methylene dimethoxy, or R in the adhesive composition can be from about 40 to about 80 mole percent hydrogen, or from about 50 to about 65 mole percent hydrogen, or about 64 mole percent hydrogen; and from about 20 to about 45 mole percent methylene methoxy, or from about 30 to about 35 mole percent methylene methoxy, or about 32 mole percent methylene methoxy; and from about 1 to

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about 10 mole percent methylene dimethoxy, or from about 1 to about 5 mole percent methylene dimethoxy, or about 4 mol percent methylene dimethoxy. Typical commercially available alcohol-soluble polyamide polymers suitable for use herein include those sold under the trade names LUCKAMIDE® 5003 from Dai Nippon Ink, NYLON® 8, CM4000® and CM8000® both from Toray Industries, Ltd., and other N-methylene methoxy pendant polyamides such as those prepared according to the method described in Sorenson and Campbell, "Preparative Methods of Polymer Chemistry," second edition, pg. 76, John Wiley & Sons, Inc., 1968, and the like, and mixtures thereof.

IN THE CLAIMS

1. (Amended) An endless seamed flexible belt comprising a first end and a second end, each of the first end and the second end comprising a plurality of mutually mating elements which join in an interlocking relationship to form a seam, the belt comprising a substrate and the seam comprising an adhesive comprising [a] an alcohol-soluble polyamide.

Claim 2 has been cancelled.

3. (Amended) An endless seamed flexible belt in accordance with claim [2] 1, wherein said alcohol-soluble polyamide comprises pendant groups selected from the group consisting of methoxy, ethoxy and hydroxy pendant groups.

18. (Amended) An endless seamed flexible belt in accordance with claim 17, wherein said polyimide is a polyaniline polyimide blend.